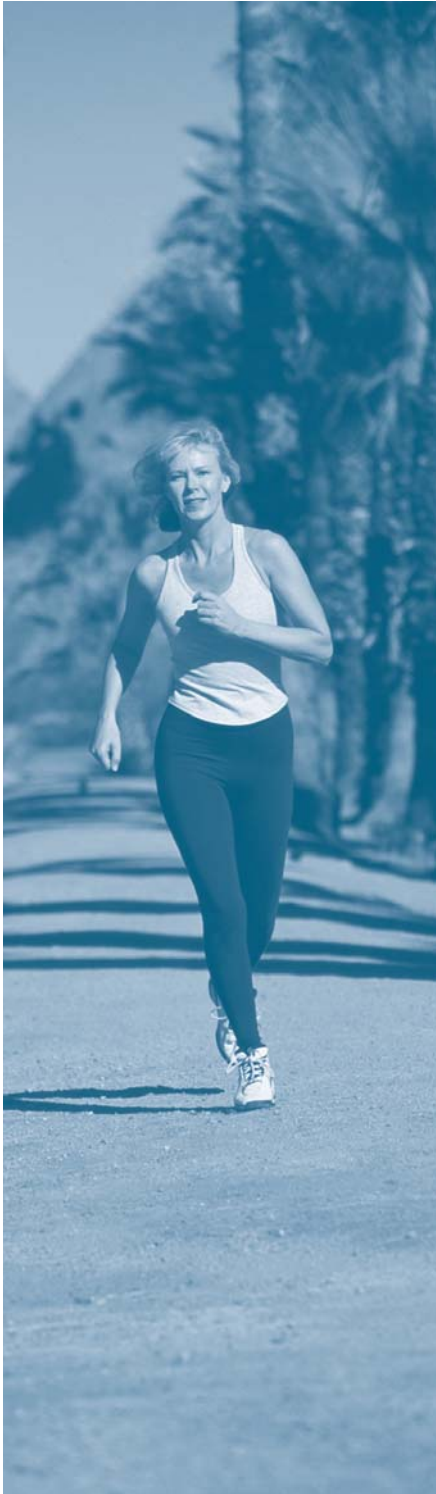


Prevention



This section of *Cancer Progress Report 2001* focuses on two kinds of factors that can affect a person's risk of getting cancer: behaviors and exposures to chemicals in the environment. Choosing the right behaviors and preventing exposures to certain chemicals may help to prevent cancers before they can start.

Behavioral Factors

Scientists estimate that as many as 50 percent to 75 percent of cancer deaths in the United States are caused by human behaviors such as smoking and dietary choices. The first part of the Prevention section describes trends in the following behaviors that can help to prevent cancer:

- Not using cigarettes or other tobacco products
- Not drinking too much alcohol
- Eating five or more daily servings of fruits and vegetables
- Eating a low-fat diet
- Maintaining or reaching a healthy weight
- Being physically active
- Protecting skin from sunlight

Smoking causes about 30 percent of all U.S. deaths from cancer. Avoiding tobacco use is the single most important step Americans can take to reduce the cancer burden in this country.

Additional important steps are maintaining a healthy weight, being physically active, eating a low-fat diet and enough fruits and vegetables, avoiding too much alcohol, and protecting skin from sunlight.

Environmental Factors

Certain chemicals in the environment are known to cause cancer. The second part of the Prevention section covers:

- Secondhand smoke (also known as environmental tobacco smoke)
- Radon in the home
- Benzene in the air

These environmental measures were chosen because of the availability of reliable national data showing trends over time. Additional environmental measures will be available for future editions of this report.

PREVENTION: Behavioral

Key Words: Adult Smoking

Adult Smoking

Cigarette smoking by adults has fallen slightly since 1990.

Smoking and Cancer

Cigarette smoking is the most preventable cause of death in the United States. It causes nearly one-third (163,000) of all U.S. cancer deaths each year and is the leading cause of lung cancer deaths. Cigarette smoking also causes cancers of the larynx, mouth, esophagus, pharynx, and bladder. In addition, it plays a role in cancers of the pancreas, kidney, and cervix.

Cigar smoking has been found to cause cancers of the larynx, oral cavity (lip, tongue, mouth, and throat), esophagus, and lung.

Measure

Percent of adults who were current cigarette smokers: Adults ages 18 and older who reported smoking 100 or more cigarettes in their lifetime and who, at the time of the interview, continued to smoke every day or some days.

Period – 1992-1998

Trends – Falling slightly

Adult cigarette smoking is falling slightly for men and women and for both combined, although the trend for women is not statistically significant.

Most Recent Estimates

In 1998, 24 percent of adults—26 percent of men and 22 percent of women—were current cigarette smokers.

Also in 1998, 2.5 percent of adults—5 percent of men and 0.2 percent of women—were current cigar smokers, an increase from earlier in the decade. Current cigar smokers have had at least 50 cigars in their lifetime and, at the time of the interview, continued to smoke every day or some days.

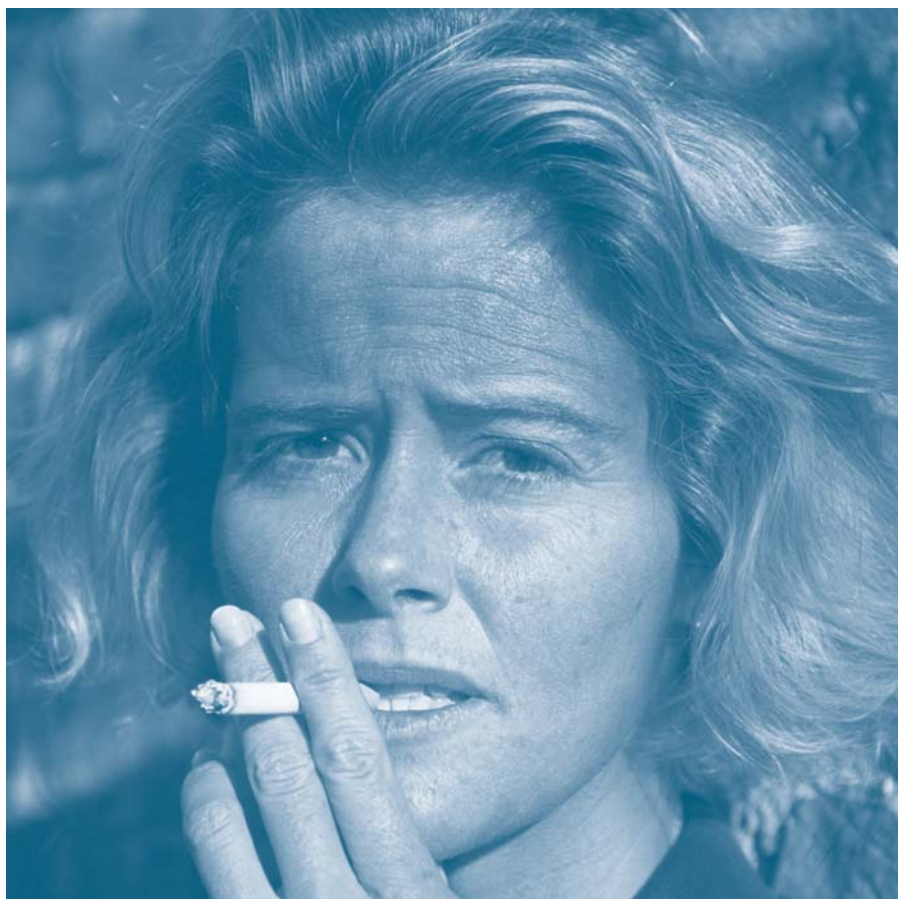
Healthy People 2010 Targets

Reduce to 12 percent the proportion of adult current cigarette smokers.

Reduce to 1.2 percent the proportion of adult current cigar smokers.

Groups at High Risk for Smoking

Men—especially American Indian/Alaska Natives and Blacks—are more likely than women to smoke cigarettes. Other high-risk groups include American Indian/Alaska Native women, people living below the poverty level, and those with 9 to 11 years of education.



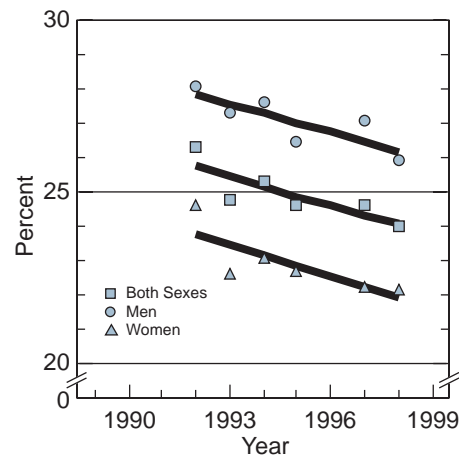
Cigar use is increasing among young and middle-aged (ages 18-44) White men with higher than average incomes and education, and among women.

Key Issues

Although the rate of smoking has dropped by nearly half since the Surgeon General's first report on smoking in 1964 (42 percent of adults were current smokers in 1965), progress has slowed in recent years. Further decreases in tobacco use could vastly improve the public's health.

From 1993 to 1997, U.S. cigar sales soared by almost 50 percent, mostly due to increased sales of large cigars. This followed new cigar marketing approaches that began in 1992.

Figure 1: Percent of Adults (Ages 18+) Who Were Current Cigarette Smokers—1992-1998



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey.
Age-adjusted to the year 2000 standard population.

PREVENTION: Behavioral

Key Words: Youth Smoking

Youth Smoking

Cigarette smoking by high schoolers is rising, with recent suggestions of a turnaround. Smokeless tobacco use appears to be falling.



Youth Tobacco Use and Cancer

For most of the 1990s, about 3,000 youth under 18 became regular cigarette smokers each day. This has declined recently to just over 2,000 each day. Of these 2,000, nearly 700 will die early due to lung cancer or other tobacco-related diseases.

Other forms of tobacco used by young people include smokeless tobacco (chewing tobacco and snuff, also known as spit tobacco), cigars, and bidis (small, brown, hand-rolled, flavored cigarettes). Each of these also can cause cancer.

Measure

Percent of high school students who were current cigarette or smokeless tobacco users: Students (grades 9-12) who reported having used cigarettes or smokeless tobacco in the 30 days before the survey.

Period – 1991-1999

Trends

Cigarettes:

The data show that current cigarette smoking among youth is rising. There appears to be a downward trend beginning in 1997, but more data are needed before this can be verified.

Smokeless tobacco:

Current smokeless tobacco use is falling, although the trend is not statistically significant.

The source of trend data used in this report does not provide data for use of either “any tobacco” or cigars before 1997.

Most Recent Estimates

Among high school students in 1999:

- 35 percent were current cigarette smokers.
- 8 percent were current users of smokeless tobacco.
- 18 percent were current cigar smokers.
- 40 percent were current users of “any tobacco.”

Healthy People 2010 Targets

Decrease the proportion of high school students who currently:

- Smoke cigarettes to 16 percent.
- Use smokeless tobacco to 1 percent.
- Smoke cigars to 8 percent.
- Use any tobacco to 21 percent.

Groups at High Risk for Tobacco Use

White, non-Hispanic students are more likely to smoke cigarettes than are Hispanic students, who in turn are more likely to smoke than Black non-Hispanic students.

High school boys are much more likely than girls to use smokeless tobacco, cigars, pipes, and bidis. Overall, White high school students are much more likely than Black high school students to report current cigar use.

Among middle school students, Blacks are much more likely than Whites to smoke cigars.

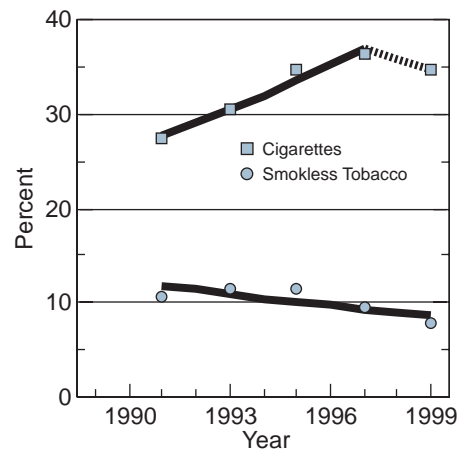
Key Issues

Since 1997, current smoking leveled off or possibly began to decline among 9th-11th graders. However, it has risen steadily among 12th graders since 1991.

In 1999, 13 percent of middle school students (grades 6 to 8) reported using some form of tobacco in the past month. Cigarettes were the most popular, followed by cigars.

Bidis—increasingly popular among young people—can be even more dangerous than cigarettes. Bidis produce higher levels of carbon monoxide, nicotine, and tar than cigarettes. Also, bidi smokers tend to inhale more often and more deeply than cigarette smokers.

Figure 2: Percent of High School Students (Grades 9-12) Who Were Current Users of Cigarettes or Smokeless Tobacco—1991-1999



Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Youth Risk Behavior Surveillance System.

PREVENTION: Behavioral

Key Words: Smoking Initiation

Age of Smoking Initiation

The average age at which people first begin smoking has been relatively stable in recent years.

Age of Initiation and Cancer

The younger a person starts smoking, the greater the lifelong risk of developing smoking-related cancers. That is because young smokers are more likely to become addicted, and the more years one smokes, the greater the risk of cancer.

Measure

Average age of first use of cigarettes, based on responses from people ages 12 and older, 12 to 17, and 18 to 25.

Period – 1990-1999

Trends

12 +: Rising slightly in the early 1990s, then stable

12-17: Rising slightly

18-25: Rising until 1997, then stable

Most Recent Estimates

In 1999, the average age at first use among people ages 12 and older was 15.4 years. Among 12- to 17-year-olds, the average age was 12.4. Among those 18 to 25, the average age was 14.8.

Healthy People 2010 Targets

Increase the average age at first use of cigarettes to:

- 14 years of age for 12- to 17-year-olds.
- 17 years of age for 18- to 25-year-olds.

There is no Healthy People 2010 target for ages 12 and older as a group.



PREVENTION: Behavioral

Key Words: Smoking Initiation

Groups at High Risk for Beginning Smoking

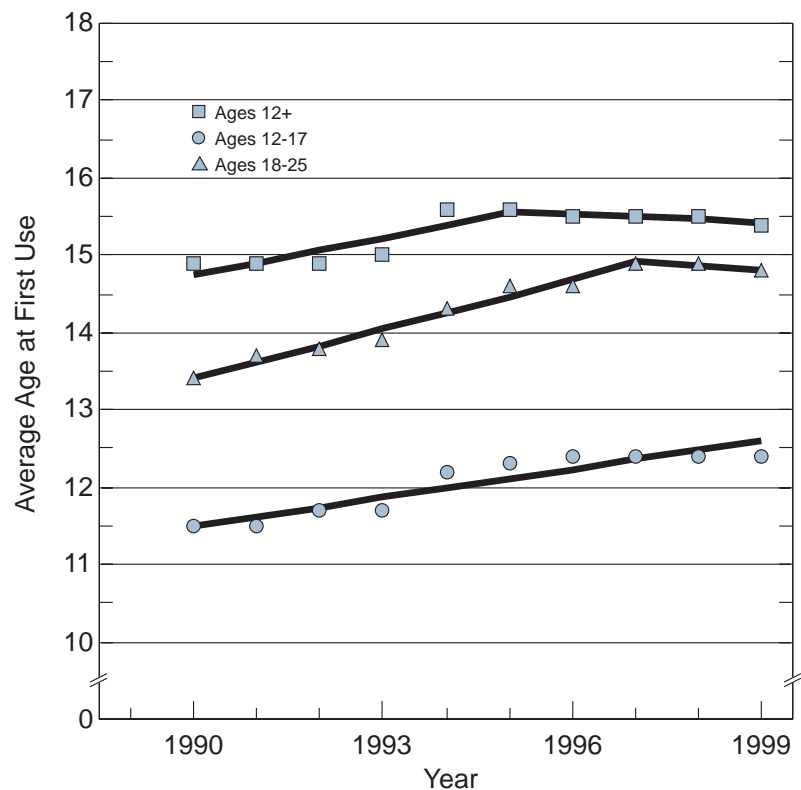
Young people who come from low-income families with less education are more likely to smoke. So are those who have less success and involvement in school and fewer skills to resist the pervasive pressures to use tobacco. Tendencies to take risks and rebel are among the other risk factors for beginning smoking.

Key Issues

Most smokers try their first cigarette before the age of 18 and become addicted during adolescence.

Efforts to help young people delay or avoid smoking may help to prevent some cancers.

Figure 3: Average Age at First Use of Cigarettes for Respondents Ages 12+, 12-17, and 18-25—1990-1999



Source: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. National Household Survey on Drug Abuse.

PREVENTION: Behavioral

Key Words: Quit Smoking

Quitting

Adult quitting rates are improving after a decline in the early 1990s.

The Effects of Quitting Smoking on Cancer

Ten years after quitting smoking, a person's risk of getting lung cancer is about one-third to one-half that of people who continue to smoke. The longer the time off cigarettes, the lower the risk. Quitting also reduces the risk of getting cancers of the larynx, esophagus, pancreas, bladder, and cervix.

Also, the sooner one quits smoking, the better. Long-term smokers who stop smoking at around 50 or 60 years of age are less likely to get lung cancer than are people who continue to smoke. Quitting at around age 30 lowers this risk even more.

The quickest non-cancer health benefit of quitting is a lower risk of coronary heart disease. This risk is cut in half after one year of quitting. After 15 years, the chance of getting the disease is similar to that of people who never smoked.

Measures

Daily cigarette smokers (ages 25 and older) who showed some quitting activity.

Daily cigarette smokers (ages 25 and older) who were able to stay off cigarettes 3 months or longer.

Period – 1992-1993, 1995-1996, and 1998-1999

Trends – Falling, then rising

Between 1992-1993 and 1995-1996, there was a clear decline in attempts to quit smoking as well as in successful longer-term quitting. From 1995-1996 to 1998-1999, both of these activities increased.

Most Recent Estimates

In 1998-1999, at least 36 percent of daily smokers 25 years of age and older made some attempt to quit. Five percent of daily smokers were able to stay off cigarettes 3 months or longer.

Also, in 1998, 41 percent of adult smokers (ages 18 and older) stopped smoking for a day or longer because they were trying to quit. Trend data are not available for this measure.

Healthy People 2010 Target

Increase to 75 percent the proportion of adult smokers (ages 18 and older) who stopped smoking for a day or longer because they were trying to quit.

There are no targets in Healthy People 2010 for the other quit measures in this report.



Groups at High Risk for Not Quitting

Older smokers (ages 65 years and older) are much less likely to try to quit. However, once they do quit, this group is more likely to be successful for 3 months or longer.

Blacks have higher rates of trying to quit than Whites, but lower rates of successfully quitting for 3 months or longer.

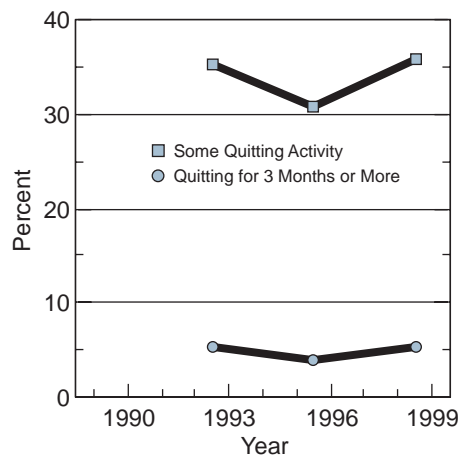
Smokers with lower levels of education and income are less likely to be successful quitters.

Key Issues

Studies show that most smokers want to quit.

Efforts to reduce smoking are most effective when multiple techniques are used, including educational, clinical, regulatory, and economic interventions (for example, increasing excise taxes), along with media campaigns and other social strategies.

Figure 4: Percent of Daily Smokers (Ages 25+) Who Tried to Quit or Quit for 3 Months or Longer—1992-1993, 1995-1996, and 1998-1999



Source: Tobacco Use Supplement to the Current Population Survey, sponsored by the National Cancer Institute. Age-adjusted to the year 2000 standard population.

PREVENTION: Behavioral

Key Word: Alcohol

Alcohol Consumption

Per capita alcohol consumption is falling slightly.

Alcohol and Cancer

Drinking alcohol increases the risk of cancers of the mouth, esophagus, pharynx, larynx, and liver in men and women, and breast cancer in women. In general, these risks increase after about one daily drink for women and two daily drinks for men. (A drink is defined as 12 ounces of regular beer, 5 ounces of wine, or 1.5 ounces of 80-proof liquor.)

Two drinks daily increase the risk of getting breast cancer by about 25 percent. The chances of getting liver cancer increase with five or more daily drinks.

The earlier that long-term, heavy alcohol use begins, the greater the cancer risk. Also, using alcohol with tobacco is riskier than using either one alone, because it further increases the chances of getting cancers of the mouth, throat, and esophagus.

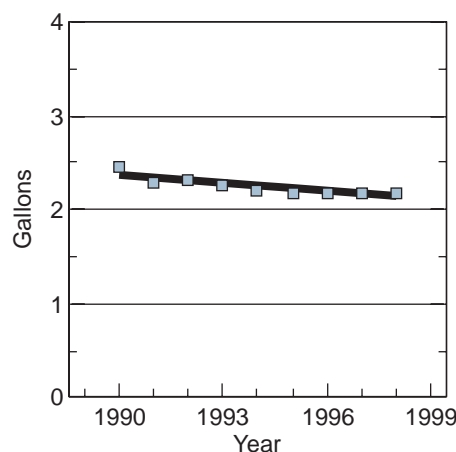
Measure

Per capita alcohol consumption: The estimated number of gallons of pure alcohol drunk per person (ages 14 and older), per year. This measure accounts for the varying alcohol content of wine, beer, and liquor. People as young as 14 are included because a large number of adolescents begin drinking at an early age.

Period – 1990-1998

Trend – Falling slightly

Figure 5: Per Capita Alcohol Consumption (Ages 14+)—1990-1998



Source: National Institute on Alcohol Abuse and Alcoholism.

Most Recent Estimate

In 1998, per capita alcohol consumption was 2.19 gallons for all beverages, including beer, wine, and liquor.

Healthy People 2010 Target

Reduce per capita alcohol consumption to 2 gallons.

Groups at High Risk for Using Alcohol

Many people start drinking as early as middle school (13- to 14-year-olds).

Among 12- to 17-year-olds, Whites and Hispanics are more likely than Blacks to use alcohol.

Among alcohol drinkers, those ages 18 to 25 consume greater quantities than any other group.

Key Issues

People who drink and smoke may find it harder to stop either of these behaviors.

Drinking low levels of alcohol can have both negative and positive health effects: It raises the risk of getting breast cancer and lowers the risk of getting heart disease. Therefore, women who already are at low risk for heart disease could reduce their risk of breast cancer by avoiding regular alcohol use.

Fruit and Vegetable Consumption

Americans are eating only slightly more fruits and vegetables than a decade ago.

Fruits and Vegetables Reduce Cancer Risk

People whose diets are rich in fruits and vegetables have a lower risk of getting cancers of the lung, mouth, pharynx, esophagus, stomach, colon, and rectum. They also are less likely to get cancers of the breast, pancreas, larynx, and bladder.

To help prevent these cancers and other chronic diseases, experts recommend 5-9 servings of fruits and vegetables daily. This includes 2-4 servings of fruits and 3-5 servings of vegetables, with dark-green and deep-yellow vegetables making up about one-third (about 1 to 2 servings) of the vegetable servings. There is no direct evidence that America's favorite vegetable, the white potato, protects against cancer.

Measure

Average daily servings of fruits and vegetables for people ages 2 and older. This measure includes fruits and vegetables from all sources.

Period – 1989-1991 and 1994-1996

Trends

Fruits: Rising

Vegetables: Rising slightly

Total average daily servings of fruits and vegetables increased from 4.5 servings in 1989-1991 to 4.9 servings in 1994-1996. Fruit servings rose from 1.3 to 1.5 servings. Vegetable servings rose from 3.2 to 3.4 servings.

Most Recent Estimates

In 1994-1996, people ages 2 and older had, on average, 1.5 servings of fruits and 3.4 servings of vegetables, for a total 4.9 servings of fruits and vegetables. Total vegetable servings included:

- Dark-green/deep-yellow: 0.4 servings.
- Starchy: 1.5 servings (mostly fried potatoes).
- Tomatoes and other vegetables: 1.5 servings.

Among racial and ethnic groups, Blacks had 4.5 total servings; Whites and Hispanics, 5; Asian/Pacific Islanders, 5.6; and Native Americans, 6.

Healthy People 2010 Targets

At least two daily servings of fruits.

At least three daily servings of vegetables, with at least one-third being dark-green/deep-yellow.

(The Healthy People 2010 targets call for 75 percent of the population to consume the minimum servings of fruits and 50 percent to consume the minimum servings of vegetables.)



PREVENTION: Behavioral

Key Words: Fruits and Vegetables

Fruit and Vegetable Consumption (continued)

Groups at High Risk for Not Eating Enough Fruits and Vegetables

Young children (ages 2-11 years), teenage girls, and young women eat the fewest numbers of servings of fruits and vegetables—about four per day. People with lower levels of income and education tend to eat fewer fruits and vegetables. Among racial and ethnic groups, Blacks have the lowest intake.

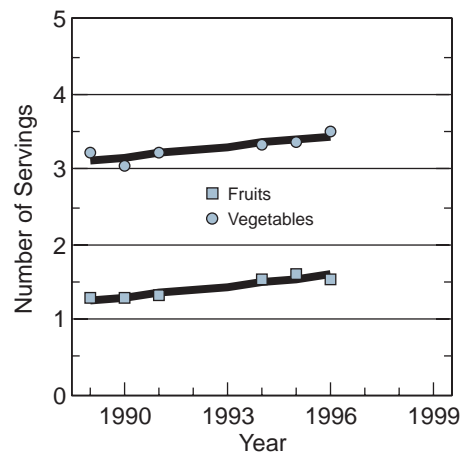
Key Issues

Although, on average, people consume more than the recommended three daily servings of vegetables, they do not consume enough dark-green/deep-yellow varieties.

Consumers—especially those living in low-income and urban areas—need access to affordable fruits and vegetables. However, between 1982 and 1997, fruits and vegetables had more retail price increases than all other food categories.

While five servings of fruits and vegetables is the minimum daily recommendation, estimates based on caloric needs suggest that Americans actually need an average of seven daily servings. These additional servings should replace sources of “empty calories” in the diet, such as added sugars and fats, to avoid taking in too many calories.

Figure 6: Average Daily Servings of Fruits and Vegetables (Ages 2+)—1989-1991 to 1994-1996



Source: U.S. Department of Agriculture. Continuing Survey of Food Intakes by Individuals. Age-adjusted to the year 2000 standard population.

Fat Consumption

Americans are getting a smaller portion of their calories from fat.

Fat Consumption and Cancer

Some studies have linked high-fat diets and different types of fat in the diet to several cancers, including cancers of the colon, prostate, lung, and endometrium. Saturated fatty acids are thought to be the most harmful kind. While earlier studies suggested similar results for breast cancer, more recent evidence has raised doubts about the importance of dietary fat in the development of breast cancer.

More research is needed to better understand which types of fat and what amounts alter cancer risk. Although monounsaturated and polyunsaturated fatty acids have been studied for a number of years, their effects are still unclear. More recent research on the effects of trans fatty acids also has yet to reach definite conclusions.

The U.S. Dietary Guidelines recommend getting less than 10 percent of calories from saturated fatty acids for general health and the prevention of chronic disease, including cancer and heart disease. The Guidelines also recommend no more than 30 percent of calories from total fat.

Measure

Intakes of total fat, and of the major fatty acids—saturated, monounsaturated, and polyunsaturated—all as a percentage of total calories.

Period – 1989-1991 and 1994-1996

Trends – Falling slightly overall

Total fat: Falling slightly

Saturated: Falling

Monounsaturated: Stable

Polyunsaturated: Falling slightly

Most Recent Estimates

Data collected from 1994-1996 show that total fat made up one-third (33 percent) of the calories people consumed, a slightly higher level

than recommended. In the same period, saturated fatty acids accounted for 11 percent of calories; monounsaturated, 13 percent; and polyunsaturated, 7 percent.

Healthy People 2010 Target

No more than 30 percent of daily calories from fat.

(The Healthy People 2010 target calls for 75 percent of the population to reach this level.)



PREVENTION: Behavioral

Key Word: Fats

Fat Consumption *(continued)*

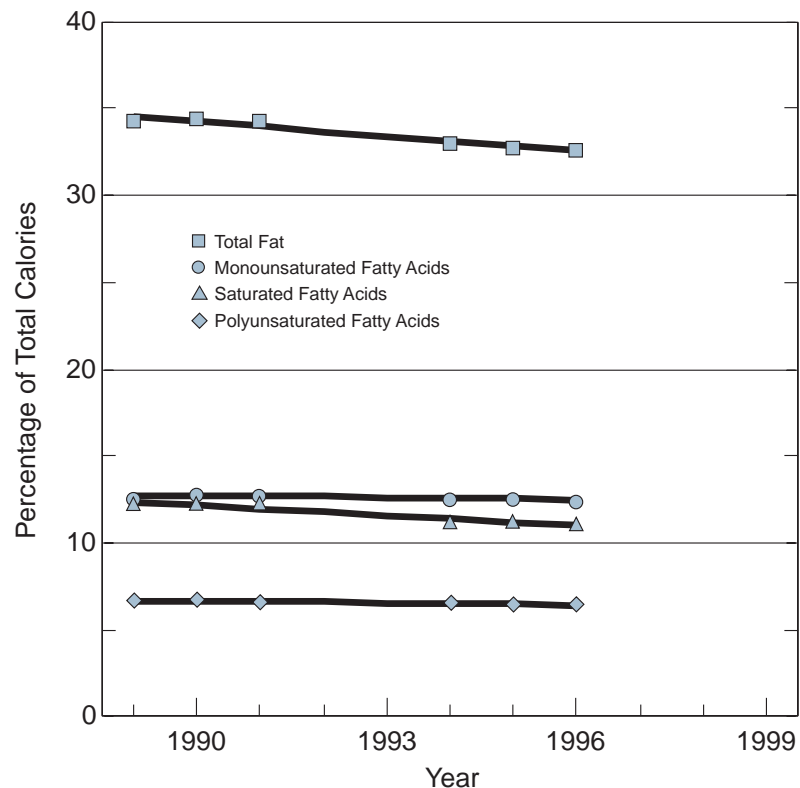
Groups at High Risk for Eating Too Much Fat

Intake of fat and the major fatty acids does not vary in the U.S. population by major racial or ethnic groups. Total fat intakes tend to decrease as education levels increase.

Key Issues

Researchers are studying how fat and fatty acids alter cancer risk. Precise and reliable measures of the amount and type of fat are needed—especially biological indicators of fat intake that might be determined from a blood test.

Figure 7: Trends in Fat Intakes as a Percentage of Total Calories—1989-1991 to 1994-1996



Source: U.S. Department of Agriculture. *Continuing Survey of Food Intakes by Individuals*.
Age-adjusted to the year 2000 standard population.

Weight

More adults are becoming overweight and obese.

Overweight, Obesity, and Cancer

Being overweight increases the chances of health problems, including heart disease, stroke, diabetes, and some cancers.

In women, overweight and obesity, weight gain, and increased amounts of fat at the waist or around the body's mid-section double to triple the chances of getting endometrial cancer. These factors also double the chances of getting breast cancer after menopause.

Obesity and increased body fat raise the risk of getting colorectal cancer. Overweight and obesity are linked to an increased risk of some types of esophageal and kidney cancers.

Measures

Percent of adults (ages 20-74) who are at a healthy weight, overweight, or obese.

These weight groups are defined by a measurement called body mass index (BMI). BMI is found by dividing weight (in kilograms) by height (in meters) squared.

Healthy weight in adults: BMI greater than or equal to 18.5 and less than 25

Overweight in adults: BMI of 25 or more

Obesity in adults: BMI of 30 or more

Period – 1971-1974, 1976-1980, and 1988-1994

Trends

Healthy weight: Stable, then falling slightly

Overweight: Stable, then rising slightly

Obesity: Rising slightly (though not statistically significant), then rising

Early data from 1999 show even further increases in overweight and obesity.

Most Recent Estimates

Among adults in 1988-1994:

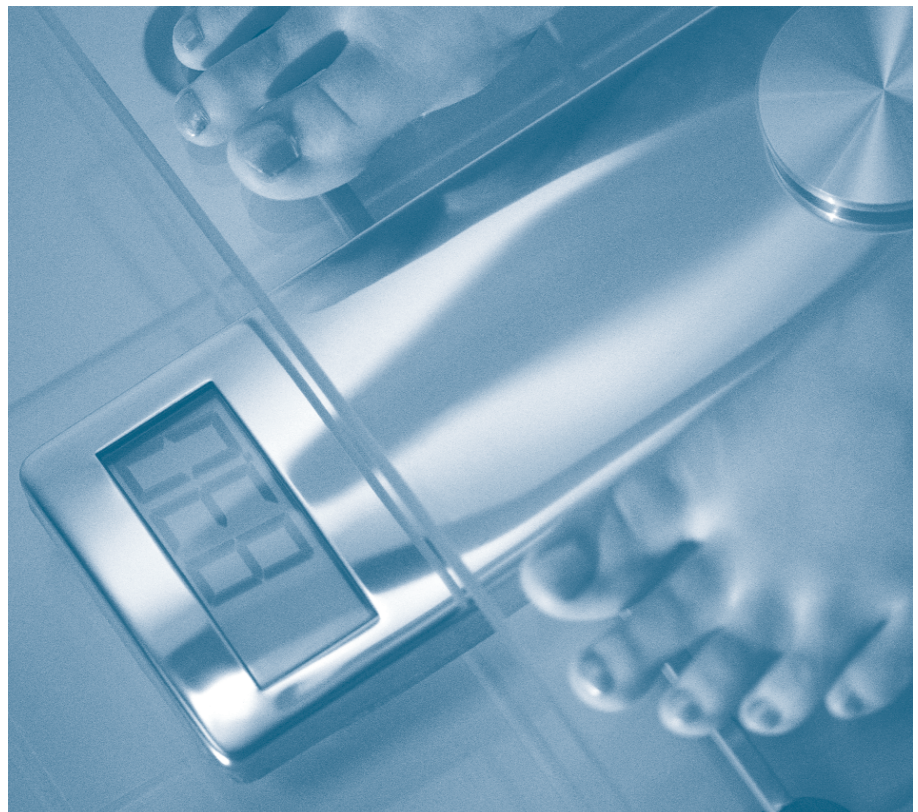
- 42 percent were at a healthy weight.
- 56 percent were overweight.
- 23 percent were obese.

Healthy People 2010 Targets

Increase to 60 percent the proportion of adults who are at a healthy weight.

There is no Healthy People 2010 target for overweight.

Decrease to 15 percent the proportion of obese adults.



PREVENTION: Behavioral

Key Word: Weight

Weight *(continued)*

Groups at High Risk for Being Overweight or Obese

Overweight and obesity are most common among Black and Mexican-American women. The same patterns are seen for children and teens in these groups.

Overweight children are more likely to become overweight adults and to suffer from the illnesses that come with it as well as premature death. As with adults, the trend toward excess weight among children has greatly increased in recent years.

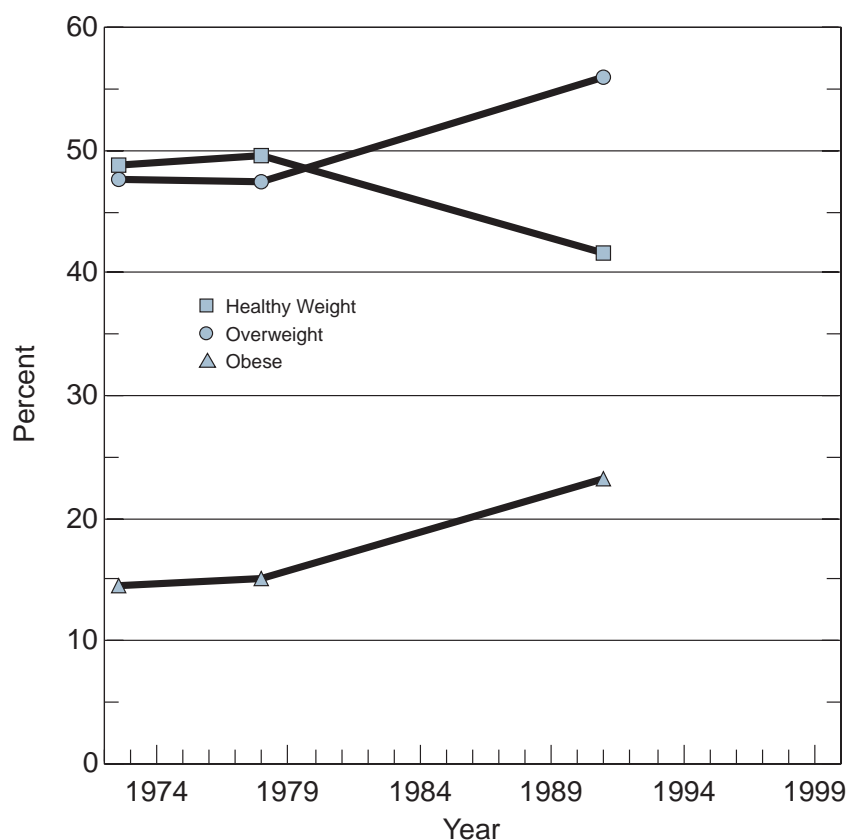
Key Issues

Daily physical activity balanced with appropriate calorie intake is one of the most effective ways to avoid weight gain. Lack of activity is believed to be one of the major reasons for the increase in overweight among U.S. youth and adults.

Increased TV watching is linked with excess weight.

See page 37 for trends in physical activity.

Figure 8: Percent of Adults (Ages 20-74) Who Were at a Healthy Weight, Overweight, or Obese—1971-1974, 1976-1980, and 1988-1994



Source: National Center for Health Statistics. National Health and Nutrition Examination Survey.
Age-adjusted to the year 2000 standard population.

Physical Activity

Only about two-thirds of adults get any physical activity in their leisure time.

Physical Activity Reduces Cancer Risk

Physical activity at work or during leisure time is linked to a 50 percent lower risk of getting colon cancer. Both vigorous and moderate levels of physical activity appear to reduce this risk. Physical activity probably is connected with a lower risk of breast cancer and possibly prostate cancer. Studies continue to look at whether physical activity has a role in reducing the chances of getting other cancers.

Measure

Percent of adults ages 18 and older who had no leisure-time physical activity during the past month.

Period – 1990-1998

Trend – Falling slightly

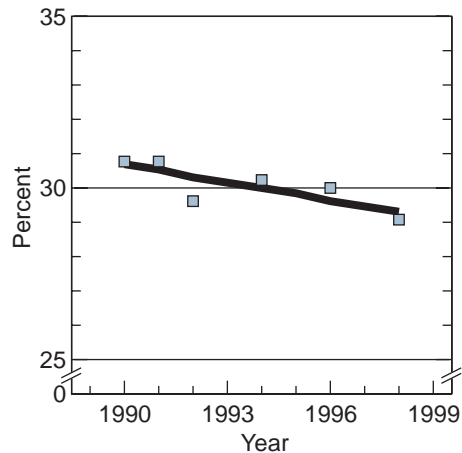
This means that only slightly more adults have any physical activity in their leisure time. However, this trend is not statistically significant.

Most Recent Estimates

Results from the Behavioral Risk Factor Surveillance System (BRFSS) show that in 1998, 29 percent of adults ages 18 and older reported no physical activity in their leisure time. BRFSS, a telephone survey, was used for *Cancer Progress Report 2001* because data have been available in a consistent form over time.

The 1998 National Health Interview Survey (NHIS), a household survey

Figure 9: Percent of Adults (Ages 18+) Reporting No Physical Activity in Their Leisure Time—1990-1998



Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Behavioral Risk Factor Surveillance System.

Age-adjusted to the year 2000 standard population.

that used different questions to assess physical activity, indicates that 40 percent of adults 18 and older reported no physical activity in their leisure time.

Healthy People 2010 Target

Reduce to 20 percent the percent of adults who engage in no leisure-time physical activity (based on NHIS data).

Groups at High Risk for Being Inactive in Their Leisure Time

Women are more likely than men, and Blacks and Hispanics are more likely than Whites to report no leisure-time physical activity. Lack of physical activity also is more common among those with less education.

For youth, physical activity is lower among females, especially Blacks. Also, physical activity decreases as children get older.

Key Issues

Since the mid-1980s, fewer high school students have taken part in physical education classes.

Removing barriers (such as lack of physical education classes) and setting up supports (such as bicycle and walking paths) can help to promote physically active lifestyles.

PREVENTION: Behavioral

Key Word: Sun

Sun Protection

Fewer than half of adults say they are likely to protect themselves from the sun.



Sun Protection Reduces Cancer Risk

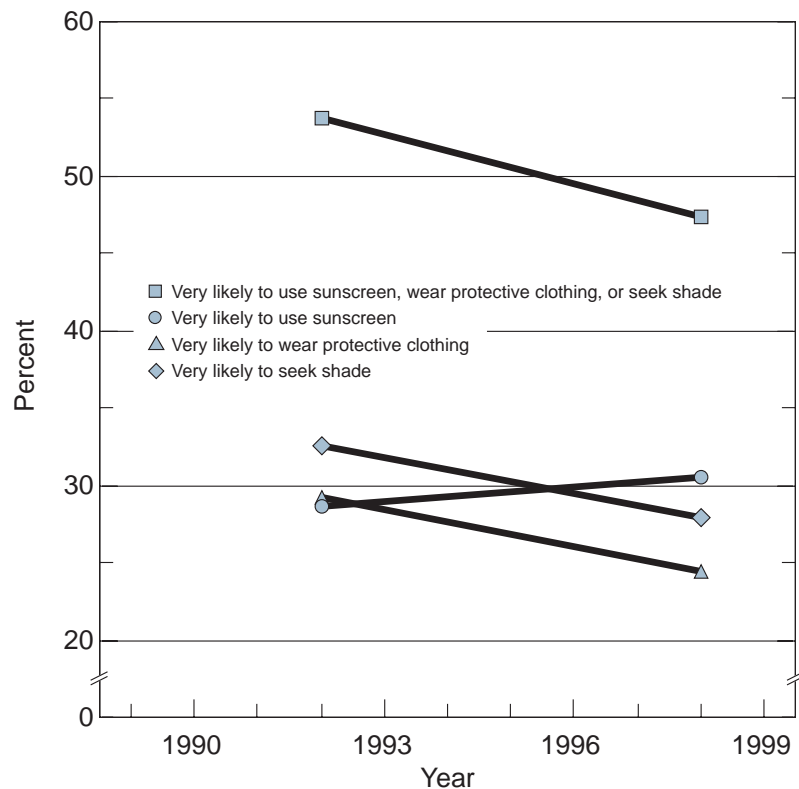
Skin cancers are most common in light-skinned people, although they also occur in people with darker skin. Studies suggest that reducing long-term exposure to the sun, to tanning booths, and to sunlamps can lower the risk of nonmelanoma skin cancer. Avoiding burns from these sources—especially by children and teens—may reduce the chances of getting melanoma skin cancer. The

rates of new cases of melanoma increased from 1973 to 1998, although the rate of increase has slowed since 1981.

Measure

Percent of adults ages 18 and older who reported they were “very likely” to practice at least one of three sun-protection behaviors—use sunscreen, wear protective clothing, or seek shade—if they were outside on a sunny day for more than 1 hour.

Figure 10: Percent of Adults (Ages 18+) Very Likely to Protect Themselves From the Sun—1992 and 1998



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey. Age-adjusted to the year 2000 standard population.

Period – 1992 and 1998

Trends – Falling overall

The percent of people very likely to use at least one sun protection method is falling, as are the percents of people very likely to wear protective clothing and to seek shade. The percent of people very likely to use sunscreen is rising slightly.

Most Recent Estimates

In 1998, 47 percent of adults said they were very likely to practice at least one of three sun protection behaviors:

- 31 percent were very likely to use sunscreen.
- 24 percent were very likely to wear protective clothing.
- 28 percent were very likely to seek shade.

Healthy People 2010 Target

Increase to 75 percent the proportion of adults who are very likely to use sunscreen, wear protective clothing, or seek shade.

Groups at High Risk for Getting Too Much Sun

Younger adults and men are less likely to use some form of sun protection. Adults with lower incomes and less education are less likely to use sunscreen.

Youths (ages 11-18) also are less likely to protect themselves from the sun. A 1998 survey found that few young people routinely practiced these behaviors on sunny days: wearing long pants (21 percent), staying in the shade (22 percent), and using sunscreen (31 percent).

Key Issues

In general, increased exposure to the sun—especially without adequate use of sunscreen and protective clothing—increases the chances of getting skin cancer.

Some research suggests that people apply less than an adequate amount of sunscreen and fail to reapply it appropriately.

PREVENTION: Environmental

Key Words: Secondhand Smoke

Secondhand Smoke

Progress is slow in efforts to enact State laws on smoke-free air.



Secondhand Smoke and Cancer

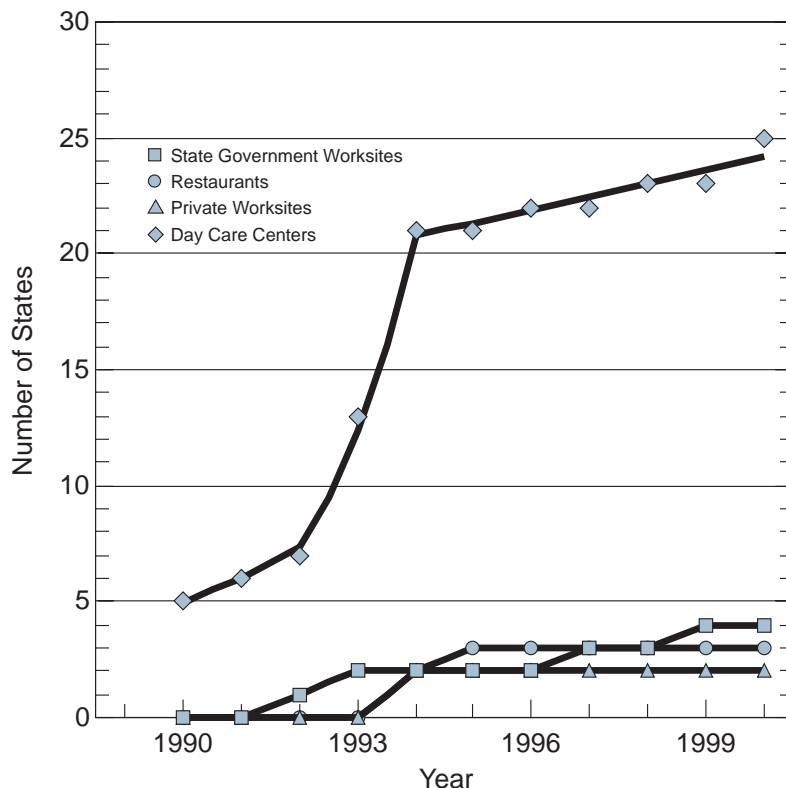
Secondhand smoke—also known as environmental tobacco smoke—is what comes from a burning cigarette, pipe, or cigar, plus what the smoker exhales. Tobacco smoke is known to contain at least 60 carcinogens. People who are exposed to secondhand smoke inhale these chemicals, just as smokers do, although at lower levels.

In 1993, the U.S. Environmental Protection Agency (EPA) reported that secondhand smoke is a "known human carcinogen." The EPA also reported that secondhand smoke causes some 3,000 lung cancer deaths each year among U.S. nonsmokers.

Measures

States (and the District of Columbia) with laws on smoke-free air in State government worksites, private worksites, restaurants, and day care centers.

Figure 11: States With Smoke-Free Indoor Air Laws in State Government Worksites, Private Worksites, Restaurants, and Day Care Centers—1990-2000



Source: National Cancer Institute. State Cancer Legislative Database. Age-adjusted to the year 2000 standard population.

Period – 1990-2000

Trends – Rising in day care centers, but still low. Stable and very low at other sites.

Most Recent Estimates

In 2000, the number of States with smoke-free indoor air laws, as measured in four types of sites, were as follows:

- State government worksites: 4
- Private worksites: 2
- Restaurants: 3
- Day care centers: 25

Results of another survey show that in 1998-1999, 69 percent of the workforce (ages 18 and older) reported there was a smoke-free policy at their workplace. Also during that time, 61 percent of people ages 18 and older reported that smoking is not allowed in their home. These represent significant increases since 1992-1993.

Healthy People 2010 Target

Increase to 51 the number of States (and the District of Columbia) with smoke-free indoor air laws for public places and worksites.

Groups at High Risk for Exposure to Secondhand Smoke

People with lower income and education levels are more likely to be exposed to smoking in their workplaces and homes. Men and younger adults are more likely to work in places that allow smoking.

Key Issues

Although secondhand smoke remains a major public health concern, nonsmokers' exposure to tobacco smoke declined more than 75 percent from 1988-1991 to 1999.

In 1999, nearly 7 out of 10 U.S. workers reported a smoke-free policy in their workplace.

State laws that protect against secondhand smoke slowly became more common in the past decade. It appears that greater improvement came from voluntary or local efforts during that time.

PREVENTION: Environmental

Key Word: Radon

Radon in the Home

More people live in homes tested for radon.

Radon and Cancer

Radon—an invisible, odorless, tasteless gas that is released from rocks and soil—enters homes through cracks and holes in the foundation. Indoor radon is the most serious environmental cancer-causing agent to which the general public is exposed. The Environmental Protection Agency estimates that as many as 8 million homes in the United States have high levels of radon. State surveys show that one out of five homes have high levels.

Radon is second only to tobacco as the leading cause of lung cancer. Radon found in homes may contribute to as many as 20,000 lung cancer deaths each year. It is a more serious health threat to underground miners.

People who are exposed to both radon gas and tobacco smoke are more likely to get lung cancer than are people who are exposed to either one alone. Most radon-related deaths from lung cancer occur among smokers.

Measure

The percent of people who live in homes tested for radon concentrations, among those who have heard of radon.

Period – 1991-1998

Trend – Rising

Most Recent Estimate

In 1998, 17.5 percent of Americans who have heard of radon lived in homes tested for radon.

Healthy People 2010 Target

Increase to 20 percent the proportion of people who have heard of radon who live in homes tested for radon.

Groups at High Risk for Not Testing for Radon

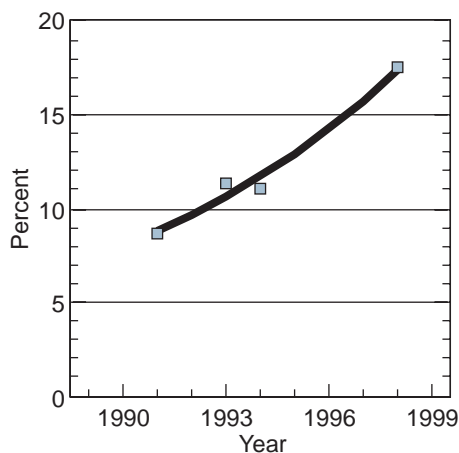
People who live in homes with a smoker are less likely to test for radon than are those who live in homes without smokers.

Key Issues

Researchers estimate that lowering indoor radon exposure would prevent about 30 percent of lung cancer deaths from radon. Of these, 86 percent would be among smokers or former smokers.



Figure 12: Percent of People Who Have Heard of Radon Who Live in Homes Tested for Radon—1991-1998



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey.

Benzene in the Air

Benzene concentrations in the air are going down.

Benzene and Cancer

Benzene is a natural part of crude oil, gasoline, and cigarette smoke. It is also used as a gasoline additive and in the manufacture of a number of products.

The general population's main exposure to benzene is inhaling air that contains it. About half of human exposures to benzene come from smoking and secondhand smoke. Other sources include vapors from heavy traffic and gas stations. Long-term exposure to high levels of benzene in the air can cause leukemia.

Measure

National yearly average concentrations of benzene in the air in metropolitan areas, measured in micrograms per cubic meter.

Period – 1993-1998

Trend – Falling

From 1993 to 1998, the average yearly concentrations of benzene declined by 37 percent.

Most Recent Estimate

In 1998, the average concentration of benzene was 1.85 micrograms per cubic meter.

Healthy People 2010 Target

There is no Healthy People 2010 target for this measure.

Groups at High Risk for Benzene Exposure

People who are exposed to benzene include those who work around

or with benzene, smokers, and people who are exposed to secondhand smoke.

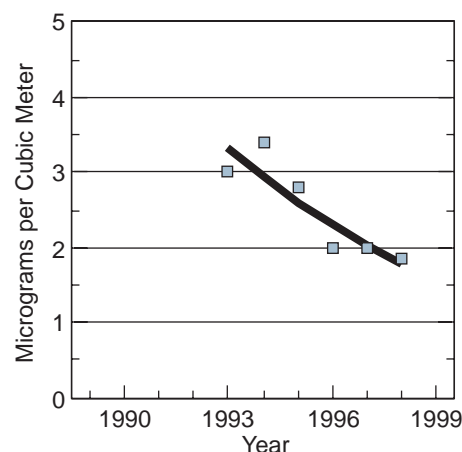
Key Issues

The Environmental Protection Agency says that benzene concentrations in the air have declined because reformulated gasoline is being used in many parts of the United States. This is an example of how changes to the environment can help to lower cancer risk.

More measures of environmental chemical carcinogen exposures—such as those reported by the National Center for Environmental Health, Centers for Disease Control and Prevention—need to be tracked over time.



Figure 13: National Trend in Annual/Average Benzene Concentrations in Metropolitan Areas (micrograms per cubic meter)—1993-1998



Source: Environmental Protection Agency. *National Air Quality and Emissions Trends Report*, 1998. March 2000.